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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/550,948

09/28/2005

Fumihiro Arakawa

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OLIFF & BERRIDGE, PLC
P.O. BOX 320850
ALEXANDRIA, VA 22320-4850

EXAMINER

CULBERT, ROBERTS P

ART UNIT

PAPER NUMBER

1792

MAIL DATE

DELIVERY MODE

07/21/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/550,948	Applicant(s) ARAKAWA ET AL.	
	Examiner Roberts Culbert	Art Unit 1792	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 June 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) 5 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 6/23/09 has been entered.

Response to Arguments

Applicant's arguments with respect to the amended claims have been considered but are moot in view of the new ground(s) of rejection. Kojima (WO 2004016059) teaches copper-cobalt particles for blacking treatment. It would have been obvious to one of ordinary skill in the art to use copper-cobalt alloy particles as recited by Kojima in order to provide suitable blacking treatment for an electromagnetic shielding sheet.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of

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each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-4 and 6 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over JP 2002/009484 to Okamoto et al. in view of the publication "Technical Trends of PDP Materials" to Katsuya and in further view of WO 2004016059 to Kojima.

Regarding Claims 1 and 4, Okamoto et al. teaches (See Figure 1 and translation) a front sheet for a display, comprising: an electromagnetic shielding sheet; wherein the electromagnetic shielding sheet includes: an absorptive layer capable of absorbing visible light and/or near-infrared radiation (24), or an antireflection layer (26c), formed on the electromagnetic shielding sheet; an electromagnetic shielding sheet comprising: a transparent base sheet (10); and a mesh metal film (14b) attached to one of the surfaces of the transparent base sheet, including lines defining apertures; wherein a front surface not

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contiguous with the transparent base sheet and side surfaces of the lines of the mesh metal film are coated with a black coating layer formed by a blacking treatment. Okamoto et al. does not expressly teach that a back surface contiguous with the transparent base sheet of the lines is uncoated with the black coating layer formed by the blacking treatment.

Katsuya teaches coating only the sides and front surface with a blacking treatment. (*See translated portions, and Figure 14, step 5 shows blacking treatment on 3 surfaces after patterning the mesh*) It would have been obvious to one of ordinary skill in the art at the time of invention to provide a back surface contiguous with the transparent base sheet of the lines being uncoated with the black coating layer formed by the blacking treatment in order to form a shielding sheet using more efficient etching methods of the metal mesh layer as such is the state of the art as recited by Katsuya.

Okamoto et al. in view of Katsuya does not expressly teach the black coating layer includes copper-cobalt alloy particles. However, Kojima teaches copper-cobalt particles for blacking treatment. It would have been obvious to one of ordinary skill in the art to use copper-cobalt alloy particles as recited by Kojima in order to provide suitable blacking treatment for an electromagnetic shielding sheet.

Okamoto et al. in view of Katsuya and Kojima does not expressly teach the black coating layer has a reflection Y value greater than 0 and not greater than 20. However, the reflection Y value is simply a measured property of the blacking treatment. Applicant teaches only that the blacking treatments may be performed by conventional techniques such as depositing metal (plating), alloy, metal oxide or sulfide, or applying a resin containing a black coloring (See Specification p. 17-18). However, applicant does not indicate a particular process or conditions is needed to achieve the property. Examples suggest only that the recited value may be achieved except when side surfaces are not covered (i.e. except for Comparative example 2). Since Prior Art including Okamoto and Kojima teach the same blacking treatments such as copper-cobalt alloy particles, plating copper or converting the copper mesh, it is reasonable to assume that the known Prior Art blacking treatments have the same recited reflection properties, or else the reflection properties result somehow from essential limitations that have not been recited. Further, the Office does not have facilities to test the reflection properties of the individual treatment processes, and applicant has not provided evidence that Prior Art blacking treatments were

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unable to provide the recited black Y-value. Since the purpose of the blacking treatment is to provide anti-reflection, it would have been obvious to one of ordinary skill in the art to form the blacking layer with a known treatment having a reflection Y value greater than 0 and less than 20, in order to minimize reflection emitted from a display panel.

Regarding Claim 2, Okamoto et al. teach the shielding sheet according to claim 1, wherein the black coating layer contains at least one of copper, cobalt, nickel, zinc, tin and chromium, or a compound of at least one of those metals. (Note that the conversion coating formed by reaction forms at least a copper compound)

Regarding Claims 3 and 6, Okamoto et al. teach the electromagnetic shielding sheet wherein the mesh metal film is formed of copper.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Roberts Culbert whose telephone number is (571) 272-1433. The examiner can normally be reached on Monday-Friday (9:00-5:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Parviz Hassanzadeh can be reached on (571) 272-1435. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Roberts Culbert/
Primary Examiner, Art Unit 1792